# Draft State Rail Plan

## MassDOT Board and FMCB Joint Meeting

**February 12, 2018**

Commonwealth of Massachusetts
STATE RAIL PLAN

# Purpose of State Rail Plan

- **To meet FRA requirements and guide future of the rail system and rail services in the state. Specifically, intended to:**
  - Set forth Commonwealth policy involving **freight and intercity** passenger rail transportation.
  - Establish policies, priorities and strategies to enhance rail services in the Commonwealth that provide benefits to the public.
  - Serve as the basis for federal and state rail investments within Massachusetts.
  - Establish the means and mechanism to coordinate with adjoining states, private parties and the federal government in projects of regional and national significance, including corridor planning and investment strategies.
  - Future commuter rail investments are currently being identified through the MBTA's Focus40 and Rail Vision planning process.

# State Rail Plan Components

- Overview of rail role in Massachusetts
- Existing Massachusetts rail system: future trends, forecasts, needs, and opportunities
- Projects considered for long-term: freight and intercity passenger rail
- Near-term funded investments and a 20-year long-term strategy for state investment in rail
- Coordination with other plans and stakeholder outreach

# State Rail Plan Vision

**Long-Term Reliability & Resiliency**

- Maintain the rail system
- Improve the rail system to enable efficient and dependable passenger and freight rail operations

**Modernize**

- Improve existing systems to meet industry standards and increase efficiencies

**Optimize**

- Maximize return on prior investments
- Leverage partnership opportunities

**Regional Balance**

- Pursue strategies that allow all parts of the state to benefit from rail investment

# Near Term Rail Priorities - CIP

- **Investing in State of Good Repair (SGR)**
  - Achieving State of Good Repair of MassDOT acquired assets is a major priority for near term investment
- **South Coast Rail Phase I**
  - Advancing South Coast Rail Phase I to provide service to the South Coast in advance of completion of the Stoughton Electric Full Build
- **286K weight limits on key freight routes**
  - Applying for federal funds to increase weight limits on New England Central freight line to 286,000 lb.
- **Service between New Haven and Springfield**
  - Supporting Connecticut's initiative to provide additional service between New Haven and Springfield over and above current shuttle service, with possibility of pilot service to Greenfield.

# Studies Now in Development

- **North South Rail Link Feasibility Reassessment:**
  - A feasibility reassessment is being done to examine a proposed pair of 1.5 mile-long tunnels that would connect the MBTA's North Station and South Station.
- **Berkshire Flyer**
  - The study is examining the potential for seasonal passenger rail service between New York City and the Berkshires, based on the CapeFLYER example.
- **Patriot Corridor Double Stack Initiative**
  - The study is examining the feasibility of double-stacked freight operations on the Patriot Corridor's right-of-way between Mechanicville, New York, and Ayer, Massachusetts.

# Long Term Rail Prioritization

- **Continued investment in State of Good Repair will be necessary.**
- **Rail Plan solicited project ideas and sought to develop project priorities that go beyond the basic State of Good Repair needs of the MassDOT rail network.**
- **Assessment of projects was based on available data that spoke to the following factors:**
  - Achievement of goals/benefits criteria:
    - Enhances mobility
    - Improves safety & security
    - Supports economic growth
    - Provides environmental benefits
    - Improves intermodal connectivity
    - Maximizes use of existing right-of-way
  - Cost/feasibility
  - Regional balance

# Tiering Process For Long Term Projects

## Tier 1: Priority for implementation

- Demonstrated alignment with Vision
- Benefits commensurate with costs
- Priority for implementation after currently committed projects

## Tier 2: Warrants further study

- Insufficient clarity on project definition, costs, or benefits
- Warrants further study
- To be revisited in subsequent plans

## Tier 3: No action planned

- Costs not commensurate benefits
- Implementation challenges
- No action recommended at this time; requires significant partner support or change in circumstances to allow for additional consideration

# Long Term Passenger Rail

# Tier 1: Priority Investments

| Tier 1 Long-Term Passenger Rail Projects | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Project Title | Line | Region | Benefits | Feasibility | | Cost |
| Tier 1 | New Haven to Springfield Service (Full implementation) | NHHS | Western | High | High | Coordination with Amtrak/CT | $ |
| | Springfield to Greenfield Passenger Rail Service | Knowledge Corridor | Western | High | High | Dependent on pilot program | $ |
| | South Station Expansion (SSX) | South Station | South Shore/NEC / East-West Connections | High | Med | Purchasing and relocation of postal service facility and associated challenges. | $$$ |
| | Improve Tower 1 into South Station | South Station | South Shore/NEC /East-West Connections | High | Med | Track portion of improvements will require purchase of postal service facility to obtain full benefits. Signal and power components can be done as SSX early action items. | $$ |
| | South Coast Rail | Stoughton | South Coast | High | Med | Permitting challenges | $$$$ |

# Long Term Passenger Rail Investments
# Tier 2: Warrants Further Study

| Tier 2 Long-Term Passenger Rail Projects to be Studied | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Project Title | Line | Region | Benefits | Feasibility | | Cost |
| Tier 2 | Western Mass to Boston Passenger Service Study | Inland Route | Western (primary) | TBD | TBD | Challenges associated with line ownership/shared use and freight conflicts; prerequisite investments. | TBD |

- ✓ Insufficient clarity on project definition, costs and benefits
- ✓ Warrants further study
- ✓ To be revisited in subsequent plans

# Long Term Passenger Rail Investments

# Tier 3: No Action Planned

| Tier 3 Long-Term Passenger Rail Projects – No Action Planned | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Project Title | Line | Region | Benefits | Feasibility | | Cost |
| Tier 3 | Privately Operated Commuter Rail Service between Worcester and Providence | P&W Mainline | Central | Med | Low | Interest by the private sector initiator, but challenges associated with ridership. | N/A - Limited Info |
| | Palmer Station | Inland Route | Western | Low | Low | Limited market with little local planning to establish station context. | $-$$ |
| | Housatonic Passenger Rail Service | Berkshire Line | Berkshires | Low | Low | No current likelihood of service improvements in Connecticut. | $$$ |
| | Passenger Service to Montreal via Springfield | Inland Route | Western/ Vermont | Low | Low | Challenges associated with line ownership/shared use and coordination with CSX. Low ridership and capacity on line. | $$$$ |

- ✓ Costs not commensurate with benefits
- ✓ Associated implementation challenges
- ✓ No action recommended at this time; Requires significant partner support or change in circumstances for additional consideration

# Long Term Freight Rail Investments

# Tier 1: Priority Investments

| Long-Term Freight Rail Projects – Priority Investments | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Project Title | Line | Region | Benefits | Feasibility | | Cost |
| Tier 1 | Priority 286K Network Build-out | Varies | Varies | High | High | Dependent on near-term 286K projects completed. | $-$$ |
| | Fall River Secondary Extension to Rhode Island Border | Fall River Secondary | Southeastern | Medium | High | Dependent on near-term Fall River Extension | $ |
| | Ware River Secondary Projects | Ware River Secondary | Central | Medium | High | Leveraging existing investments. Challenges associated with acquiring track & ROW. | $ |

- ✓ Assumes a robust system-wide State of Good Repair program
- ✓ Demonstrated alignment with vision and goals
- ✓ Benefits commensurate with costs
- ✓ High priority for implementation after near-term projects are completed

# Long Term Freight Rail Investments
# Tier 2: Warrants Further Study

| Long-Term Freight Rail Projects to be Studied | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Project Title | Line | Region | Benefits | Feasibility | | Cost |
| Tier 2 | Otis Industrial Track | Falmouth Secondary | Southeastern | Medium | High | N/A | $-$$ |
| | New Bedford Marine Commerce Terminal Rail Spur | New Bedford Secondary | Southeastern | High | Medium | Challenges with establishing a new rail corridor in a urban area. | N/A - Limited Info |

- ✓ Insufficient clarity on project definition, costs and benefits
- ✓ Warrants further study
- ✓ To be revisited in subsequent plans

# Long Term Freight Rail Investments
# Tier 3: No Action Planned

| Long-Term Freight Rail Projects | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Project Title | Line | Region | Benefits | Feasibility | | Cost |
| Tier 3 | Extend New Bedford Secondary to New Bedford Airport | New Bedford Secondary | Southeastern | Low | N/A | No information available | N/A - Limited Info |

- ✓ Costs not commensurate with benefits
- ✓ Associated implementation challenges
- ✓ No action recommended at this time; Requires significant partner support or change in circumstances for additional consideration

# Next Steps

- Update draft based on public comment
- Submit to FRA for approval
- Explore potential federal funding opportunities to address rail system needs
- Continue to address State of Good Repair while advancing priority projects

# Appendix

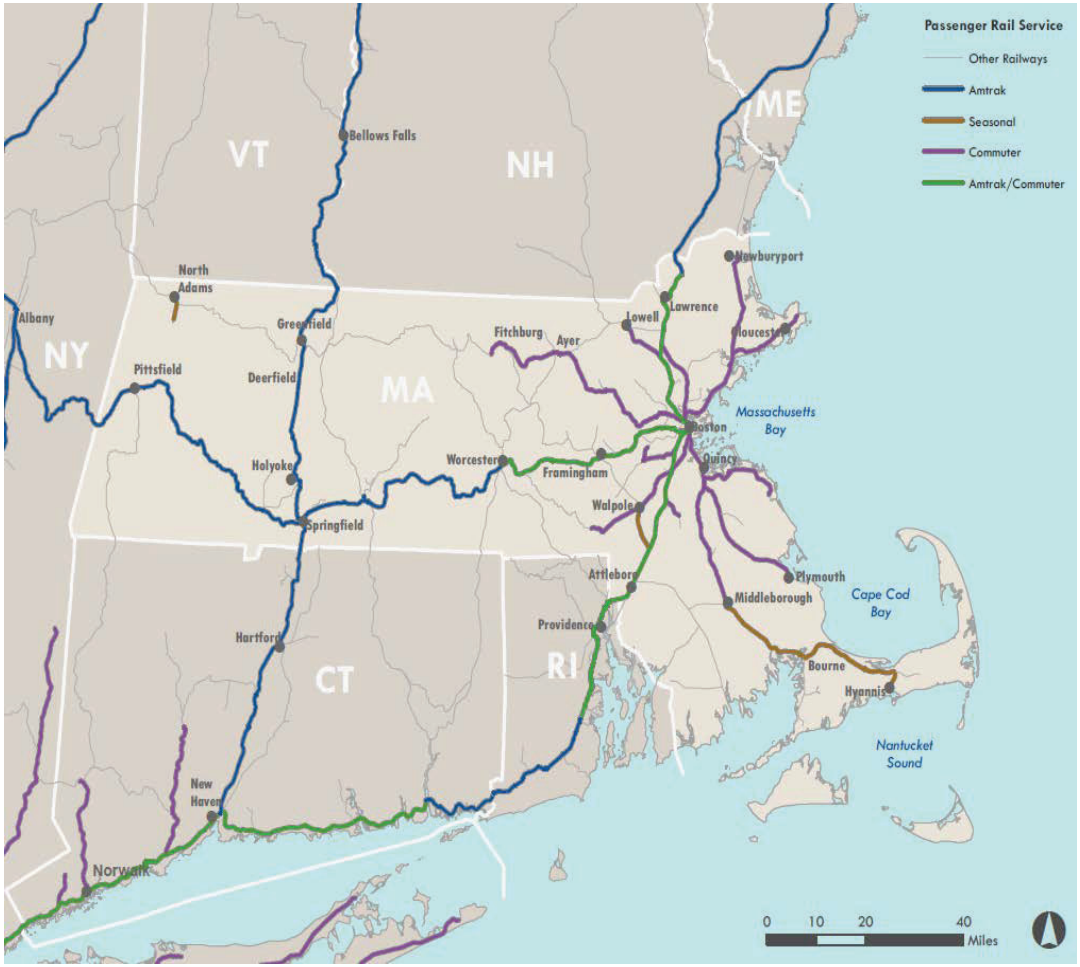
# Commuter Rail

- **The State Rail Plan is not considering MBTA commuter rail projects unless they have a direct impact on Amtrak passenger service or are currently being advanced by MassDOT.**
- Future commuter rail investments are currently being identified through:

  **MBTA Focus40**: The long-term capital plan for the MBTA

  **MBTA Rail Vision**: Identifying strategies for leveraging the MBTA's rail network with the goals of increasing ridership and meeting the transportation and economic growth needs in the Greater Boston region. Strategies being assessed include different types of vehicles and/or service models and electrification.

# Passenger Rail Operations




Passenger service includes:

- 5 intercity Amtrak routes (Downeaster, Vermonter, NEC, Lake Shore Limited, New Haven Springfield Shuttle)
- 4 seasonal/tourist routes (MBTA and private)
- 12 commuter rail MBTA routes*

* MBTA service is not a focus of the State Rail Plan because of the Focus40 and MBTA Rail Vision plans underway.

# Freight Rail Operations

- Numerous operators
- Many shared freight / passenger rail corridors
- Limited service by Class I railroads

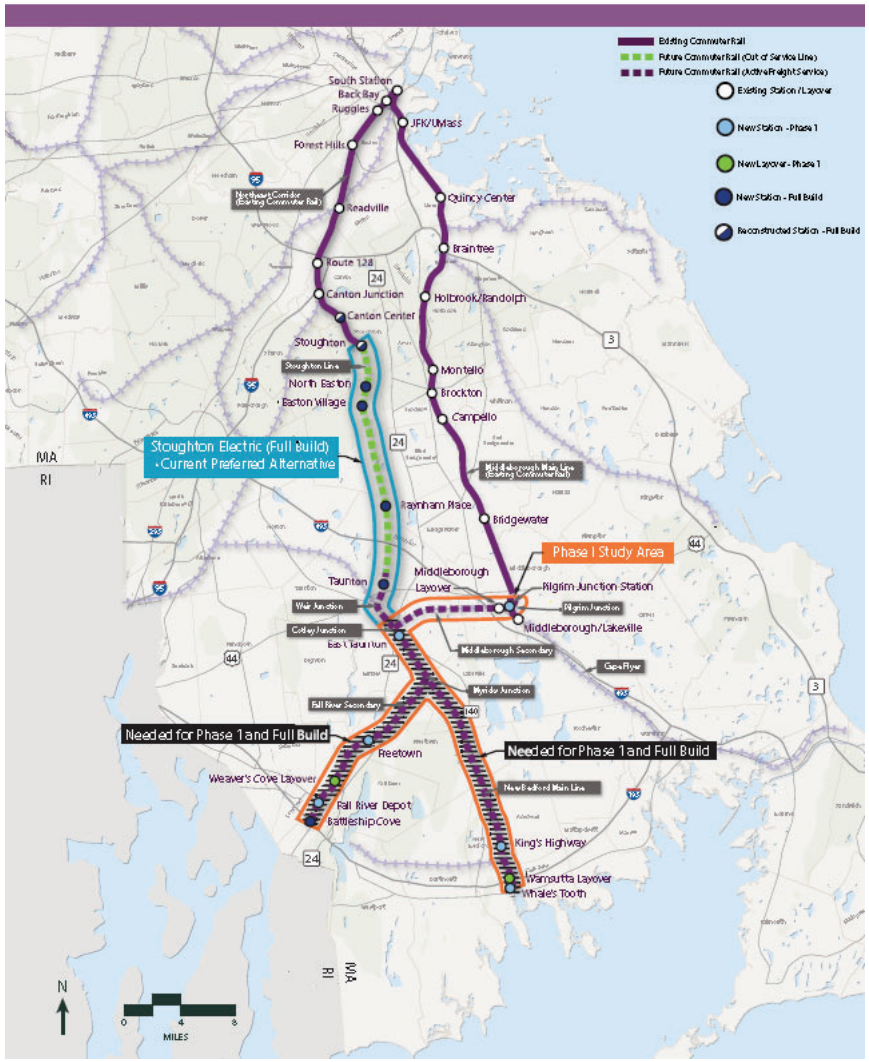
# Near Term Highlight:

## South Coast Rail: Phase 1

### Project Summary

- While MassDOT remains committed to the Full Build Stoughton Electric Route to provide commuter rail to the South Coast, building Phase 1 will allow a substantial amount of service to be provided to Fall River and New Bedford by 2022, several years before the Full Build can be completed.

South Coast Rail Phasing Plan




Commonwealth of Massachusetts
STATE RAIL PLAN

# Accomplishments Since 2010 Plan

- **Rail Acquisition**
  - MassDOT acquired approximately 200 miles of rail to upgrade assets for public benefit and protect key corridors for the MBTA
- **CSX Partnership**
  - CSX Double Stack Initiative and Intermodal Investment
- **Industrial Rail Access Program (IRAP)**
  - IRAP awards of $12.7 million leveraged $19.3 million in private sector investment in first five program years
- **Grade Crossing Safety Programs**
  - 2010-2016: 100 grade crossing improvement projects across Massachusetts

# Accomplishments Since 2010 Plan

- **Knowledge Corridor**
  - Track improvements (50 miles acquired and rehabilitated)
  - Rehabilitation of Springfield Union Station
  - Three new stations (Holyoke, Northampton and Greenfield)
- **South Coast Rail Early Action Implementation**
- **Haverhill Line/Downeaster Improvements**
  - Double-tracking
  - Bridge rehabilitation
- **Partnership with Rhode Island to upgrade shared MBTA/Amtrak line for MBTA service to T.F. Green Airport**

# Long Term Prioritization Process

- **How we refined the project list of modernization and expansion ideas:**

### Define Universe

- MassDOT, stakeholders, and partner agency priorities
- Input from elected officials, regional MPOs, civic associations, and the public

### Evaluate

- Benefits/Goals
- Project cost and feasibility
- Regional Balance
- Level of information

### Tier

- Tier 1: Priority for implementation
- Tier 2: Study Further
- Tier 3: No Action Planned

# Long Term Freight Rail

# Priority 286K Network Build-out

# Long Term (Tier 1)

- **Project Summary**
  - Project would build on existing weight-on-rail upgrades and complete any priority 286K improvements not accomplished in the near term rail priorities
- **Benefits**
  - Improved shipper efficiency
  - Strengthened freight corridor between industrial cities and larger national freight rail system
  - Reduced transportation costs to local businesses utilizing freight rail
  - Modal choice to freight shippers currently utilizing trucks to move cargo
- **Next Steps**
  - Identify most strategic locations and identify funding opportunities with railroads

# Fall River Secondary Extension to Rhode Island Border

# Long Term (Tier 1)

- **Project Summary**
  - Improvements and extension to facilitate rail service to local industries.
- **Benefits**
  - Reduced roadway congestion and related environmental benefits
  - Improved access to larger freight rail network
- **Next Steps**
  - Identify funding through IRAP or federal funding opportunities

# Ware River Secondary
# Long Term (Tier 1)

- **Project Summary**
  - Project secures public rights and access to a 1.2 mile segment connecting Ware River Secondary to the CSX Main Line
- **Benefits**
  - Addresses a key missing link for MassDOT owned rail
  - Continued improvements support expanded freight rail service in the region
- **Next Steps**
  - Ascertain whether rights available and whether continuing customer support will warrant investment.

# Otis Industrial Track Study
# Long Term Study (Tier 2)

- **Project Summary**
  - Enhance project track spur off of the Joint Base Cape Cod (JBCC) and long term improvements would replace ties, rail, ballast, surface, and transload equipment
  - Provide improved access and reliability of service for Cape Cod
- **Considerations and Next Steps**
  - Need to understand more about costs and feasibility

# New Bedford Marine Commerce Terminal Rail Spur Study Long Term (Tier 2)

- **Project Summary**
  - Would extend existing New Bedford Secondary rail line 3,750 feet to a newly constructed marine facility
  - Could provide access to alternative modes of freight transportation
  - May support water-dependent industries and provide future anchor for South Terminal focus area
- **Considerations and Next Steps**
  - Potential environmental impacts and uses

# Long Term Passenger Rail

# New Haven to Springfield Service
# Long Term (Tier 1)

- **Project Summary**
  - The combined CTRail/Amtrak service will provide 12 roundtrips each weekday between New Haven and Springfield Union Station, starting in 2018
  - MassDOT to support costs
- **Benefits**
  - Improved mobility and accessibility
  - Potential for additional transit-oriented development.
- **Next Steps**
  - Finalize long-term agreements with Connecticut

# Springfield to Greenfield Passenger Rail Service Long Term (Tier 1)

- **Project Summary**
  - First Phase (near term) – Initial pilot program with limited service
  - Second Phase – Examine potential for service long-term along corridor
- **Benefits**
  - Improved mobility and accessibility
  - Potential for additional transit-oriented development
- **Next Steps**
  - If pilot is successful, explore long-term options to provide service

# South Station Expansion

# Long Term (Tier 1)

- **Project Summary**
  - The project would expand the South Station Terminal, increasing passenger capacity and improving experience at the station.
  - The project will add 7 new tracks and 4 new platforms, totaling 20 tracks and 11 platforms
  - The Final Environmental Assessment (EA) and Section 4(f) Determination and the Finding of No Significant Impact (FONSI) were issued in October, 2017.
- **Benefits**
  - This project will allow the system to meet current and future high-speed, intercity, and commuter rail service needs. It would be required to enable several projects being considered as part of this plan.
- **Next Step**
  - Acquire property of adjacent postal service facility to enable expansion

# Improve Tower 1 into South Station

# Long Term (Tier 1)

- **Project Summary**
  - Upgrade Tower 1 signals and power as an early action item prior to SSX to improve reliability.
- **Benefits**
  - Reduction in conflicting movements through terminal area
    - Improved efficiency and reliability – meeting on-time performance and reducing delays
    - Additional flexibility in cases of disabled trains or other unexpected activities in the Tower 1 Interlocking area
    - Emissions reduction benefits
- **Next Steps**
  - Advance design with current FRA grant

# South Coast Rail

# Long Term (Tier 1)

- **Project Summary**
  - Extend commuter rail service from Boston to Fall River and New Bedford through the Stoughton Electric route.
- **Benefits**
  - Would provide new commuter rail service to Fall River and New Bedford.
    - Reduction in travel times (77 minutes to New Bedford from Boston; 75 minutes from Fall River to Boston)
- **Next Steps**
  - Advance design and permitting

# Western Massachusetts to Boston Passenger Rail Service Study
# Long Term (Tier 2)

## Project Summary:

- Study service between Boston and Western Massachusetts (Springfield and potentially Pittsfield)

## To address issues raised in prior analysis this study will look at the following:

- Speed/time goals
  - Technology choices
  - Peak period service
- Separate track
- Right-of-Way acquisition
- South Station capacity
- Construction impacts
- Stations
- Safety
  - Grade crossings
  - PTC
  - Risks and safeguards
- CSX capacity and cooperation

# Questions and Discussion

# Contact

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